



CITY of SALFORD
SCIENCE MUSEUM
BUILE HILL PARK



THE
STORY of COAL



A note by Alan Frost, Keeper

PRICE SIXPENCE

This note has been written in association with that describing our "Buile Hill No. 1 Pit". It provides evidence of the wish of the Art Galleries, Museums and Libraries Committee to offer information upon its collections. In that connection talks on the Science Museum and its "Buile Hill No. 1 Pit" and on the Museum and Art Gallery, Peel Park and its old street known as "Lark Hill Place" are given to parties by the Keepers of both Museums by arrangement.

A. Frape

Director of Museums and Art Galleries

April 1958

WHAT IS COAL ?

Coal is the remains of plant life which lived on this earth millions of years ago. It is composed of many varied types of vegetation which include ferns, bushes and trees. These plants lived in a swampy area similar to the tropical forest swamps of today. Peat is coal in its early form.

WHO DISCOVERED COAL ?

It is difficult to say who discovered coal but we do know from ancient writings that about 3,000 years ago the Chinese were aware that a certain black rock would burn. In parts of their country with little wood for fires they were known to dig into the ground in search of this black rock. The first discovery of coal was probably made by early man who may have lit a fire on some rock and found that it would burn. This discovery no doubt led to men searching exposures such as river banks, valley sides and land slides. Very soon they discovered that this black rock appeared in layers on the hillside and that the layer or seam penetrated deep into the hill. Consequently early man burrowed deep into the hillside for his coal until subsequently he sank a shaft down into the ground when he knew that coal was beneath. He also discovered that the coal existed between layers of different kinds of rock. The first shafts resembled the village well at the top and the miner was lowered into his mine in a basket. When he had filled it he was hauled to the surface by the women folk.

HOW WAS COAL FORMED ?

Millions of years ago, practically the whole area of the British Isles was covered by a large swamp and land was only evident in parts of Northern Ireland, Northern Scotland, the South West Coast and a ridge across Central Wales which resembled a central island. Water flowed into the swamp from rivers round about and it gradually sank. Occasionally the sinking stopped for a short period and this allowed sand and mud from the rivers to fill it in a little. In the ensuing years the land rose again and the level of the water diminished so that trees and ferns were able once again to grow in a somewhat tropical climate. The forests then grew for many centuries after which they died and formed masses of decaying vegetation. Later, more sinking took place and the forests were engulfed by water from the rivers which laid down more sand and mud over the peat. This process took considerable time and continued over millions of years until finally the formation of peat came to an end. Thereafter layers of rock-forming material were laid down over the peat. Throughout time the peat has been compressed to form coal, the sand to form sandstone, and the mud to form shale.

WHEN WAS COAL FORMED ?

The greatest amount of coal was formed during a period of geological history known as the Carboniferous system which began about 285 million years ago and lasted approximately 75 million years. Coal is also found in



Geography of the British Isles 250 million years ago

rock of other ages from the Devonian system of 300 million years ago to the Oligocene system dated about 40 million years ago. In the Oligocene system the coal is in a form known as lignite or brown coal.

TYPES OF COAL

There are five different types of coal which represent the various stages of formation or coalification. The first form which results from the death and decay of plant life is *peat*, which can be seen on moors and in some desolate areas. Chat Moss, about four miles from Salford, is a peat moss. In peat it is possible to trace with the eye the plant remains. When burnt it gives much smoke with little heat and large quantities of ash. *Lignite* is similar to peat but has been subjected to considerable alteration due to the elapse of time. It is usually dark brown or black and is sometimes known as brown coal. It is also possible to recognise traces of vegetable matter in this. The next form of coal is the ordinary household coal or *bituminous coal*. In this variety most signs of vegetable material are invisible to the naked eye. There are many varieties of bituminous coal of particular importance which include steam coal, gas coal and coking coal, all of which are suitable for their different purposes. Bituminous coals soil the fingers on handling and do not break with clean surfaces. *Cannel* coal is not quite so abundant, occurring principally in Scotland and Lancashire. It is a dull hard coal rich in hydrogen which was once regarded as a valuable gas-making coal. The last stage in conversion is *anthracite* which is hard, breaks with a clean shell-like fracture and does not soil the hands. It burns slowly giving out little smoke or flame but emitting considerable heat.

During coalification approximately three quarters of the original weight of the vegetable material is lost. At the same time water and gases are given off and what remains is coal.

WHERE IS COAL FOUND ?

Coal is found in most parts of the British Isles but mainly in South Lancashire, the Midlands, the Lowlands of Scotland and South Wales. It is also found in the United States of America, Canada, South Africa, Europe, Russia, India, Australia, China and the Antarctic.





Coalfields of the British Isles

*The attention
of visitors is drawn to*
LARK HILL PLACE
*a full scale
reproduction of an old street to be seen
at the*
MUSEUM and ART GALLERY, PEEL PARK

and to

The "FRIENDS OF THE SALFORD MUSEUMS"
Association whose members are closely associated with the
development of the museums. Their meetings take the
form of Period Entertainments, Talks on Costume, Music,
Theatre, Art, Science, etc. and visits to places of interest.

*Annual Subscription 5/-
Details from A. Frape, Hon. Secretary/Treasurer
"Friends of the Salford Museums" Association
Museum and Art Gallery, Peel Park
Salford, 5*



CITY of SALFORD
MUSEUMS and ART GALLERIES

MUSEUM and ART GALLERY, Peel Park. Phone: PENdleton 2649

SCIENCE MUSEUM, Buile Hill Park. Phone: PENdleton 1832

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